

Surgical Safety: Addressing the JCAHO Goals for Reducing Wrong-site, Wrong-patient, Wrong-procedure Events

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Abstract

Under standards set forth by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO), health care facilities are required to implement established patient safety goals. The efforts by a team at the Naval Hospital, Cherry Point, NC (NHCP), to address and prevent wrong-site surgery have resulted in an initiative that can easily be implemented within other facilities.

After developing a surgical verification checklist, the NHCP wrong-site surgery initiative adopted consistent, facilitywide policies that required staff to ensure that all surgical procedures are done on the right patient and at the right location, and that the correct procedure is performed. A mechanism to measure the effectiveness of the new initiative by recording and tracking data was put into place. Within the first 4 months of implementation, the operating room (OR) had reached its benchmarking goal of 100 percent compliance with surgical verifications. In addition, a simple educational tool displayed in numerous OR and clinic areas serves as a reminder to caregivers and consumers that patient safety is at the top of the NHCP priority list.

Introduction

According to the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) standards, all accredited health care facilities are required to implement established patient safety goals. Recent efforts made to address and prevent wrong-site surgery by a team at Naval Hospital, Cherry Point, NC (NHCP), have exemplified the wrong-site prevention goal, as well as its intent. Those efforts have manifested in the development of a wrong-site prevention initiative that can easily be communicated and implemented within other health care systems, thereby assisting in creating a culture of safety and increasing facility patient safety efforts.

Organizational culture change is never easy. It begins with the establishment of common goals and an understanding that such goals reflect “buy-in” or a vested interest by the participating group members. Trying to get any group to come to a common agreement on anything can be, and often is, quite exhausting. However, JCAHO, through its accreditation standards, serves as one of the best examples of a catalyst for cultural change. In essence, JCAHO establishes standard practices to assure safe patient care and recognizes health care organizations that adopt the standards with a certificate of accreditation. If an

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organization adopts the common goals of JCAHO, it must also buy into the JCAHO philosophies behind the standards, i.e., to understand or adopt the *intent* of the standard as well as implementing the standard itself. Here begins NHCP's journey toward cultural change in the operating room (OR) area regarding the patient safety goal of preventing wrong-site surgery.

Method

The wrong-site surgery prevention initiative began as part of an NHCP Patient Safety Award program, supported and enhanced by participation of the senior leadership within the facility. The award program was designed as part of the Patient Safety Week activities that occur at the hospital each year. The program's intent was to create "friendly competition" among staff members to encourage creative processes and the development of new initiatives to ensure patient safety. One group of individuals developed a surgery checklist (Figure 1). Although the checklist was not selected as the Patient Safety Award winner for the year in which it was submitted, the process that it represented continued to grow and transform, becoming more multidisciplinary in nature and more interwoven throughout the facility.

The OR prevention of wrong-site surgery initiative reached its 100 percent compliance rate benchmark within 4 months.

While the structured environment of a military facility may suggest that change will be initiated and people held accountable, those facilities also struggle with the same human factors, such as resistance to change, that civilian facilities face. The military structure may help, but it does not always guarantee that a process will reach its benchmark within a very short period of time. What has become clear over time is that a major contributing factor to the wrong-site surgery prevention initiative's success was that it was created by staff, and not dictated or mandated from above. One or more individuals conceived the idea and thus had a personal vested interest in the process and its success. Recipients of this past year's Patient Safety Award are obtaining similar results, demonstrating a 2-month initiation-to-benchmark result. In sum, a very good case could be made that individuals who are involved in a process take ownership of the process, including accountability for making it successful. And, most likely this very scenario explains JCAHO's multidisciplinary philosophy. If individuals from different disciplines with a vested interest are brought into the process, the initiative is more likely to succeed.

Coinciding with the development of the surgical verification checklist to prevent wrong-site surgery was the need to examine OR policy to determine if the sign-off was consistent with other facility policies, such as Command and Bureau of Medicine and Surgery (BUMED) instructions. Hence, the first barrier to the implementation of the initiative was identified. A new department policy had to be developed. And, as JCAHO has more clearly defined its standard,¹ the department policy has undergone two revisions. The latest is shown in Table 1.

Figure 1. Surgical verification checklist—Naval Hospital, Cherry Point, NC

**Naval Hospital Cherry Point
Surgical Verification Checklist**

All shaded areas must be initialed by the specified provider and RN.

Preoperative Area	Patient will not leave the holding area until all steps are completed.	RN	Anesthesia Provider	Surgeon
	Verify patient using 2 Identifiers. Verify that the patient's informed consent describes the operative site and laterality as appropriate.			
	Verbally confirm the surgical site and laterality with the patient and/or family members/significant others.			
	Review the medical record (H&P, Dr's Orders, and Consent) for consistency in identifying the correct surgical site.			
	The Surgeon will mark the surgical site with an indelible marking pen, over or as close as possible to, the surgical incision site. RN and Anesthesia Provider will verify. N/A is appropriate when surgical site marking is not practical or is exempt per NHCP O.R. Surgical Site Policy.			
Operating Room	Case will not start until all steps are completed.	RN	Anesthesia Provider	Surgeon
	Confirm patient identity, consent, operative procedure, and laterality before transfer to the operative bed. (RN circulator).			
	Review the medical record for consistency in identifying the correct surgical site.			
	Review imaging studies and confirm surgical site. N/A is appropriate if imaging studies do not exist.			
	After the patient is draped and immediately before the incision or start of the procedure, final confirmation of correct patient, correct side and site, correct procedure, patient position, and the availability of correct implants, special equipment or other special requirements is verbally confirmed by the Surgeon, Anesthesia, RN circulator, and Surgical Techs.			

Signatures:

Date:

Surgeon: _____

Anesthesia Provider: _____

Registered Nurse: _____

Addressograph

Revised: 21 Jun 04

Table 1. Surgical verification policy (revised June 21, 2004)

1. A Surgical Site Verification Checklist will be used for every surgical procedure performed in the Main Operating Room.
2. Two patient identifiers will be used to correctly identify each patient and will be documented on the Surgical Verification Checklist.
3. Surgeries involving extremities, laterality (right vs. left), multiple structures (fingers, toes), or levels (spine) of the body are required to have surgical site markings by the surgeon with documentation on the Surgical Site Verification Checklist. The surgeon's initials will be used as the surgical site marking. The initials should be over or as close as possible to the incision site and must be visible after the patient has been draped.

The following exemptions to site markings apply:

 - a) Single organ cases.
 - b) Interventional cases for which the catheter/instrument insertion site is not predetermined.
 - c) Teeth, but operative tooth name(s) must be documented on consent, H&P, and Doctor's Orders.
 - d) Premature infants, for whom the mark may cause a permanent tattoo.
 - e) The patient refuses surgical site markings.
4. The Surgical Site Verification Checklist will be completed in its entirety for patients refusing surgical site markings, with the exception of the surgical site initial block where it will be documented as "Patient Refused." Other surgical site marking exemptions will be documented as N/A in the surgical site initial block, with entire completion of the Surgical Site Verification Checklist.
5. The entire surgical team will verify and agree to the following, before an incision is made:
 - a) Correct identity of the patient.
 - b) Correct surgical site.
 - c) Correct level, laterality, or structure (if applicable).
 - d) Correct procedure to be performed.
 - e) Correct patient position.
 - f) Availability of correct implants and any special equipment or requirements.
6. To the extent possible, the patient (or legally designated representative) will be involved in the surgical site verification process. The patient should be awake and aware if possible.
7. The Surgical Site Verification checklist must be completed in its entirety. Each person completing any portion of the checklist must initial that portion of the list.
8. An incomplete checklist will result in postponement of the surgical encounter until the documentation is completed.
9. Any discrepancy noted during the verification process will result in an immediate halt to the surgical encounter until the discrepancy can be resolved by all members of the surgical team.

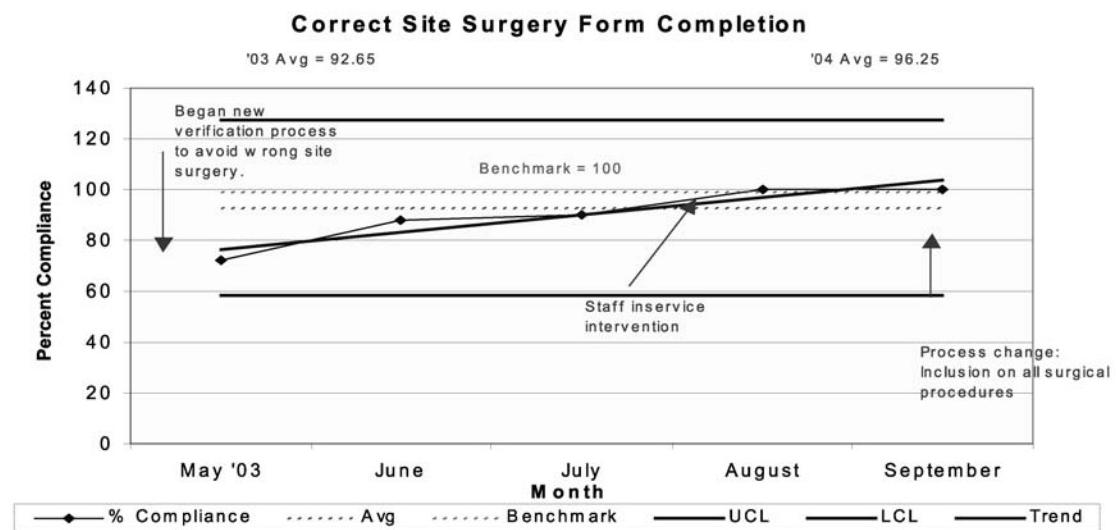
In the process of developing the new policy, what became apparent to some team members was that certain consistencies should apply throughout the facility, regardless of whether an individual patient was having an appendage or a skin

mole removed. For example, verification of the right patient, the right location, and the right procedure should be common practice in any area of the hospital. Thus, an expanded Instruction or policy was drafted to accommodate facilitywide needs. The existing Consent by Patients for Medical Care Instruction (NAVHOSPCHPINST 6320.88) was used and expanded to include a surgical verification section. The revised policy outlines the necessary components of surgical verification; but in recognizing the differences in various areas of the hospital, it leaves the development of department policy to the individual departments. Components of the surgical verification policy include patient identification and involvement, preoperative verification, informed consent, site marking, confirmation by use of imaging data (if relevant), a time-out verification, and documentation with signatures.*

Results

When the OR first began using the surgical verification checklist, the initiative was not inclusive of all patients. A mechanism was put into place to measure the effectiveness of the process (Figure 2). The standard Command facility Performance Improvement tool was used to explain and display the data monitor and supporting information. The process has since been modified to include all surgeries, and the changes in data volume are captured in each monthly report using the tool. Record review and data tracking in the OR area began in May 2003. As stated earlier, within the first 4 months the team had reached its benchmarking goal of 100 percent compliance with surgical verifications.

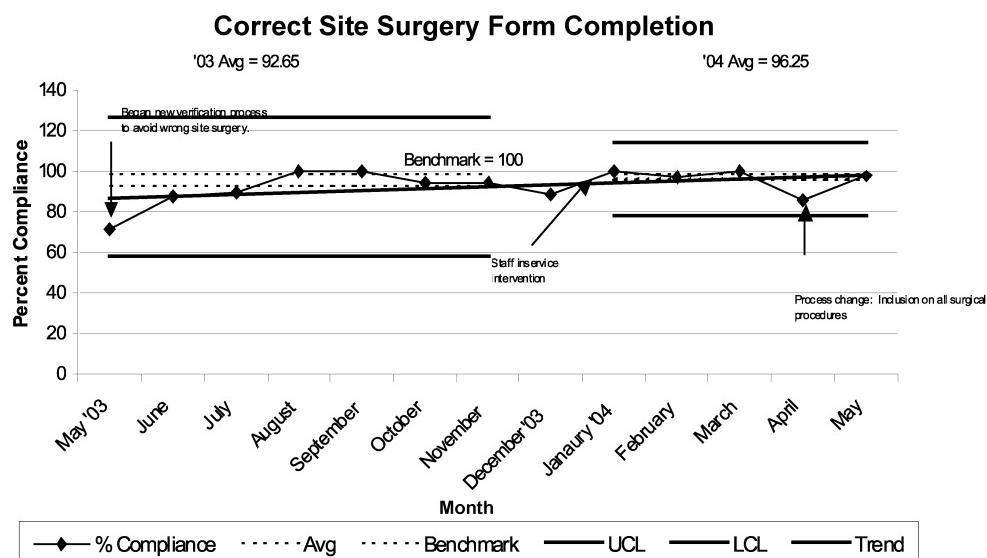
Figure 2. Effectiveness of the surgery verification checklist



* All reference materials are available from the author.

Measures of performance can be constantly changing entities. Such measures can reflect unexpected events, or the benchmark may be raised or lowered in an effort to achieve better results. Unexpected events have certainly occurred during this team's initiative. The first obstacle—the need for policy development—was followed by others. Due to the facility's expansion of services in early fall 2003, the patient volume in the OR tripled, but with no additional staffing. As could be predicted, process breakdowns began to occur (Figure 3). In late December, an emphasis was placed on in-service training for members of the OR staff to refocus attention on the initiative. The policy was expanded in March 2004 to include all surgeries in the initiative, again raising patient volume for the initiative. Previously, surgeries not specific to an extremity or laterality were excluded.

Figure 3. Completion of the surgery form over time



One of the other issues faced by the facility was a greater fluctuation in the data due to a generally smaller volume of surgeries when compared to larger facilities. For example, a staff member who returned from an extended leave had not been involved in the process changes nor trained, and did not document several charts. Data from a small number of charts have the potential of changing percentages greatly at a small facility such as ours.

Members of the OR staff continue to monitor their initiative for compliance. And the team continues to monitor the overall facility process, including department policy development, implementation, and compliance. Among the other facility departments in the forefront of this initiative is the Surgery Clinic. Staff members of this clinic have already developed policy and implemented the initiative. The clinic staff has chosen to use a "stamp" to list components for documenting surgical patient identification, site, and procedure verification. The stamped area can then be checked off and signed at the bottom by the surgeon and staff member(s). Other clinic areas of the facility are also using the stamp because

of its ease of use for simple procedures. As per policy, more complex procedures require the use of the surgical verification checklist.

Discussion

Team members addressed the intent of the JCAHO standard by implementing a facilitywide Instruction or policy to verify correct patient, site, and procedure. The question then arose as to how to monitor compliance of this initiative across an entire facility. While the OR had a specific patient record-monitoring tool in place, other areas did not. And, if the initiative was to get buy-in from providers and staff, it was paramount that the mechanism could not be burdensome. After discussing numerous monitoring options, it became apparent that a mechanism, the Medical Record Review Tool for Open and Closed Records, already existed. Using this existing tool was beneficial because monitoring the initiative would not require additional medical records to be pulled and reviewed, thereby saving staff time and resources. In addition, the existing tool would also facilitate collection of departmental results as well as aggregation of data to look for trends and process breakdowns across the facility. The team presented its case, and after approval by the Medical Executive and Medical Records Committees, a patient safety section was added to the Medical Record Review tool to address surgical site verification. The patient safety section also monitors other patient safety goals, such as avoidance of using inappropriate abbreviations and verification of read-backs.

Education is a critical component of any new initiative. Thus, a simple but effective educational tool was implemented (Figure 4a). It reflects the necessary components to meet the JCAHO standard in a simplified manner, using the fingers of the hand as mental triggering mechanisms. A condensed version of the tool is displayed in numerous OR areas, the Emergency Department, and each of the clinic areas. The display serves as a reminder to caregivers and consumers alike that patient safety is a top priority of the NHCP (Figure 4b).

Conclusion

All health care systems face similar obstacles in implementing the JCAHO prevention of wrong-site surgery standard. The NHCP initiative serves as a blueprint for any facility to follow and/or adapt, since it has already developed tools for implementation, education, and monitoring. It might be helpful to use a multidisciplinary approach in reviewing the information for adaptation. Such an approach would obtain buy-in and ownership of the process within each facility.

The NHCP wrong-site surgery prevention initiative not only demonstrates quality, safety, and a commitment to patient care, it also assists in the creation of a culture of safety, whereby patients can be assured that they will receive only the best of care. And the providers/staff can feel pride of accomplishment in that they are providing the best of care. However, the initiative goes even further—it stands as an example of the success that can be accomplished through multidisciplinary efforts and buy-in to an evolutionary and very complex health care system.

Figure 4a. Wrong-site surgery education tool

Ensuring Correct Procedures

A Helping Hand to Ensure Correct Procedures

... making things safer for our patients

Step 1: Consent Form
Consent form must include:

- Patient's full name
- Procedure site
- Name of procedure
- Reason for procedure

Step 2: Mark Site
The procedure site must be marked by a physician or other privileged provider who is a member of the operating team
Do not mark non-procedure sites

Step 3: Patient Identification
Staff will ask the patient to STATE (not confirm):

- Their full name
- SSN or date of birth
- Site for the procedure

- Check responses against the marked site, ID band, consent form

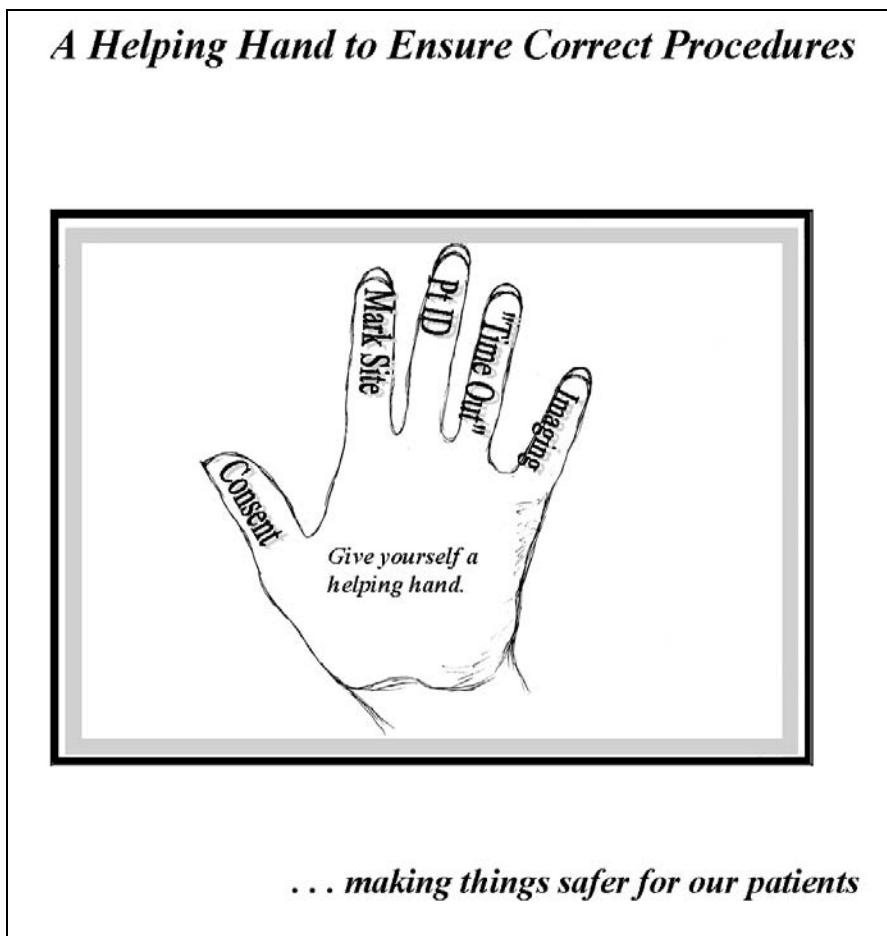
Step 4: "Time Out"
Prior to the beginning of a procedure, verbally confirm through a "time out":

- Presence of the correct patient
- Marking of the correct site
- Procedure to be performed

- Availability of the correct implant (if applicable)

Step 5: Imaging Data
If imaging data is used to confirm the site, verify the images are correct and properly labeled

Figure 4b. Wrong-site surgery display reminder



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